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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,314	03/18/2004	H. Dean Cubley	1981-02700	5762
23505	7590	08/09/2006	EXAMINER	
CONLEY ROSE, P.C.			WENDELL, ANDREW	
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HOUSTON, TX 77253-3267			ART UNIT	PAPER NUMBER
			2618	

DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/803,314	CUBLEY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Andrew Wendell	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-13 and 17 is/are rejected.
- 7) ☒ Claim(s) 4-5 and 14-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 6-7, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toya (US Pat Appl# 2002/0022452) in view of Shapira (US Pat# 7,072,611) and further in view of Kardos (US Pat Appl# 2005/0135583).

Regarding claim 1, Toya's land mobile satellite-communication system teaches a plurality of antennas 26 and 29 (Fig. 3); and a plurality of receiver/transmitters 27a-d and 24 (Fig. 3) coupled to the antennas 26 and 29 (Fig. 3); wherein at least one of the antennas is configured to communicate with a plurality of handsets and, through the repeater, the handsets can communicate with an orbiting satellite (Sections 0014-0015 and 0028-0030). Toya fails to teach communicating with a plurality of handsets simultaneously and a satellite phone.

Shapira's system for improving communication teaches communicating with a plurality of handsets simultaneously (Col. 2 lines 19-25 and Col. 16 lines 52-56).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate communicating with a plurality of handsets simultaneously as taught by Shapira into Toya's land mobile satellite-communication system in order to increase service (Col. 2 lines 31-39).

Both Toya and Shapira fail to teach a satellite phone.

Kardos's telephone conferencing teaches a satellite phone (Sections 0017-0018).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate a satellite phone as taught by Kardos into communicating with a plurality of handsets simultaneously as taught by Shapira into Toya's land mobile satellite-communication system in order to improve efficiency and effectiveness of a teleconference (Section 0016).

Regarding claim 2, Shapira further teaches wherein one antenna 724 (Fig. 13) permits communications to be transmitted to the handsets and another antenna 720 (Fig. 13) permits communications to be received from the handsets.

Regarding claim 3, Toya further teaches a phase shifter coupled to at least one antenna (Section 0060).

Regarding claim 6, Toya teaches means for communicating via a direct line of sight link to an orbiting satellite (Section 0029); means for communicating with a plurality of phones (Sections 0014-0015 and 0028-0030); means for amplifying signals received from the satellite that target the phones (Sections 0014-0015 and 0028-0030); and means for amplifying signals received from the phones that target the satellite (Sections 0014-0015 and 0028-0030). It is well known that there has to be amplification in the repeater station (Fig. 3) to be able to communicate between the

Art Unit: 2618

satellite and phones. Toya fails to clearly teach amplification, communicating with a plurality of handsets simultaneously, and a satellite phone.

Shapira teaches means for amplifying signals 734 and 736 (Fig. 13) received from the station that target the phones; and means for amplifying signals 730 and 732 (Fig. 13) received from the phones that target the satellite (Sections 0014-0015 and 0028-0030); and communicating with a plurality of handsets simultaneously (Col. 2 lines 19-25 and Col. 16 lines 52-56). Both Toya and Shapira fail to teach a satellite phone.

Kardos's telephone conferencing teaches a satellite phone (Sections 0017-0018).

Regarding claim 7, Toya further teaches means varying phase of at least one of the signals (Section 0060).

Regarding claim 13, Toya teaches a first antenna 29 (Fig. 3) configured to receive first signals from a plurality of communication handsets; a second antenna 29 (Fig. 3) configured to transmit second signals to the handsets (Sections 0014-0015 and 0028-0030); a third antenna 26 (Fig. 3) configured to communicate with a satellite (Sections 0014-0015 and 0028-0030); a first receiver/transmitter 27a-d (Fig. 3) coupled to the first antenna 29 (Fig. 3); a second receiver/transmitter 27a-d (Fig. 3) coupled to the second antenna 29 (Fig. 3); wherein at least one of the antennas is configured to communicate with a plurality of handsets and, through the repeater, the handsets can communicate with a satellite (Sections 0014-0015 and 0028-0030). Toya fails to teach a second antenna and a satellite phone.

Shapira teaches a first antenna 720 (Fig. 13) configured to receive first signals from a plurality of communication handsets; a second antenna 724 (Fig. 13) configured to transmit second signals to the handsets; a third antenna 710 (Fig. 13) configured to communicate with a station; a first receiver/transmitter 730 and 732 (Fig. 13) coupled to the first antenna 720 (Fig. 13); a second receiver/transmitter 734 and 736 (Fig. 13) coupled to the second antenna 724 (Fig. 13); wherein at least one of the antennas is configured to communicate with a plurality of handsets and, through the repeater 700 (Fig. 13), the handsets can communicate with a station. Shapira and Toya fail to teach a satellite phone.

Kardos's telephone conferencing teaches a satellite phone (Sections 0017-0018).

3. Claims 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Toya (US Pat Appl# 2002/0022452) in view of Shapira (US Pat# 7,072,611).

Regarding claim 8, Toya's land mobile satellite-communication system teaches receiving signals from a plurality of handsets (Sections 0014-0015 and 0028-0030); amplifying the signals to produce first amplified signals (Fig.3 and Sections 0014-0015 and 0028-0030); and transmitting the first amplified signals to an orbiting satellite (Fig. 3 and Sections 0014-0015 and 0028-0030). It is well known that there has to be amplification in the repeater station (Fig. 3) to be able to communicate between the satellite and phones. Toya fails to clearly teach amplifying signals.

Shapira's method for improving communication teaches amplifying 730 and 732 (Fig. 13) the signals to produce first amplified signals; and transmitting 710 (Fig. 13) the first amplified signals to an station.

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate amplifying signals as taught by Shapira into Toya's land mobile satellite-communication system in order to increase service (Col. 2 lines 31-39).

4. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toya (US Pat Appl# 2002/0022452) in view of Shapira (US Pat# 7,072,611) and further in view of Yamamoto et al. (US Pat# 6,453,150).

Regarding claim 9, Toya's land mobile satellite-communication system in view of Shapira's method for improving communication teaches the limitations in claim 8. Both Toya and Shapira fail to teach varying phase of the signals received from the handsets.

Yamamoto et al. maximum-ratio synthetic transmission diversity device teaches varying phase of the signals received from the plurality of handsets (Fig. 1).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate varying phase of the signals received from the handsets as taught by Yamamoto et al. into amplifying signals as taught by Shapira into Toya's land mobile satellite-communication system in order to improve antenna gain (Col. 2 lines 42-49).

Regarding claim 10, Toya further teaches receiving signals from an orbiting satellite (Sections 0014-0015 and 0028-0030); amplifying the signals received from the

satellite to produce second amplified signals (Sections 0014-0015 and 0028-0030); and transmitting the second amplified signals to one or more handsets (Sections 0014-0015 and 0028-0030). It is well known that there has to be amplification in the repeater station (Fig. 3) to be able to communicate between the satellite and phones. Toya fails to clearly teach amplifying signals.

Shapira teaches amplifying 734 and 736 (Fig. 13) the signals received from the station to produce second amplified signals; and transmitting 724 (Fig. 13) the second amplified signals to one or more handsets.

Regarding claim 11, Toya further teaches varying phase of the signals received from the satellite (Section 0060).

Regarding claim 12, Shapira further teaches coupling each of two communication paths 730 and 732 (Fig. 13) to a single antenna 710 (Fig. 13) adapted to communicate with the station.

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toya (US Pat App# 2002/0022452) in view of Shapira (US Pat# 7,072,611) and further in view of Kardos (US Pat App# 2005/0135583) and further in view of Yamamoto et al. (US Pat# 6,453,150).

Regarding claim 17, Toya's land mobile satellite-communication system in view of Shapira's method for improving communication and further in view of Kardos's telephone conferencing teaches the limitations in claim 13. Both Toya, Shapira, and Kardos fail to teach a first and second phase shifter.



Yamamoto et al. maximum-ratio synthetic transmission diversity device teaches a first phase shifter 25 and 26 (Fig. 1) coupled to the first receiver/transmitter 22 and 23 (Fig. 1) and the first antenna 20 (Fig. 1) and a second phase shifter 25 and 26 (Fig. 1) coupled to the second receiver/transmitter 22 and 23 (Fig. 1) and the second antenna 20 (Fig. 1), the first and second phase shifters configured to vary the phase of signals passing to the first antenna and received from the second antenna (Fig. 1).

Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art at the time the invention was made to incorporate a first and second phase shifter as taught by Yamamoto et al. into a satellite phone as taught by Kardos into a second antenna as taught by Shapira into Toya's land mobile satellite-communication system in order to improve antenna gain (Col. 2 lines 42-49).

#### ***Allowable Subject Matter***

6. Claims 4-5 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Wendell whose telephone number is 571-272-0557. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Art Unit: 2618

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Andrew Wendell  
Examiner  
Art Unit 2618

8/4/2006

 8/7/06

QUOCHIEN B. VUONG  
PRIMARY EXAMINER